PAST DEVELOPMENTS OF LARGE WIND GENERATORS IN EUROPE

Ulrich Hutter

University of Stuttgart
Stuttgart, Germany

This presentation describes the more important large wind-driven power systems that have been proposed or built in this century in the various countries of Europe. Some of these are shown in the accompanying figures 1 to 9. The physical size, maximum power output, and other characteristics of each system were described with the aid of slides. The most important of the large-size wind-driven plants in Europe were built in Germany, England, Denmark, France, and Russia.

Also described, in some detail, was the 100-kilowatt wind-driven generator that was designed and built by the author in cooperation with the Allgaier-Works of Wurttenburg, West Germany (figure 10). A short movie was presented to show the 100-kilowatt Hutter-Allgaier machine in operation. In figure 11 is displayed the measured output in kilowatts for various wind speeds. For comparison, the data of Andreau-Enfield-Cables wind generator system are shown.
130 KW. 21 m diameter
ELECTRICITE DE FRANCE  
NEYR PIC

Figure 3

8 m Ø/10 KW DC AND 18 m Ø/50 KW AC PLANTS,  
TESTFIELD VENTIMOTOR GMBH, WEIMAR 1942.

Figure 4

24 m Ø, 100 KW. ENFIELD-ANDREAU WIND-  
DRIVEN GENERATOR. ST. ALBANS 1953

Figure 5

31 m DIAMETER, 800 KVA, NOGENT LE ROI,  
FRANCE, 1958-1960

Figure 6
Figure 7

200 kW, 24 m diameter, plant of J. Juul
Sydstrællands Elektricitets Aktieselskab (SEAS) CEDER, DENMARK

Figure 8

15 m Ø, 100 kW, John Brown Wind-Turbine, Orkney, England

Figure 9

10 m DIAMETER, 10 kW, U. Hutter - Allgaier Design, West Germany, 1950-1960

Figure 10

35 m DIAMETER, 100 kW, U. Hutter - Allgaier Design, West Germany, 1961-1966
Figure 11. - The power output of the Hutter-Allgailer 100 kW wind-driven generator plant as a function of the average wind speed and a comparison with the performance of the 100 kW Andreau-Enfield-Cables wind generator.